Dimensions® Platform

Better Detection. Clinically Superior. Low Dose.

The Hologic's 3Dimensions™ mammography system represents the next evolution of our 3D™ platform.
It is based on the Selenia® Dimensions® platform so that customers can continue to benefit from more than 10 years of real-world learnings, as well as the clinical evidence and functional enhancements acquired over this time. In addition to all of the current benefits, the latest system includes additional advantages in terms of improved image clarity, personalised patient experience and enhanced workflow that are available as upgrades to existing Selenia® Dimensions® systems.*

3Dimensions™ Mammography System

To keep you and your patients at the forefront of breast cancer screening, 3Dimensions™ is our latest and most advanced system. The system is designed to increase clinical confidence with improved image clarity and enhanced workflow features, while transforming your patients breast imaging experience.

Selenia® Dimensions® System

For a time-tested and flexible solution, Hologic offers you the Selenia® Dimensions® system, the **#1** 3D Mammography™ system in the world used by over 7000 clinical sites. The system comes in two main configurations and a range of options to meet every need.

*Some product enhancements may not be available to all Selenia® Dimensions® systems. Some 3Dimensions™ workflow enhancements are not backward-compatible with Selenia® Dimensions® systems. The comfort and clarity enhancements are available to Selenia® Dimensions® systems as an upgrade option. Consult your local Hologic representative for additional details.

Imaging, Workflow and Acquisition Workstation Features

Initial Imaging Modes

	Dimensions Packages		
	3Dimensions™ 2D/3D	6000 2D/3D™	Avia™ 3000
Full Field Digital Mammography (FFDM)			
2D Screening	●	●	●
2D Diagnostic	●	●	○
3D Mammography™ Exam			
3D™ Screening Standard Resolution			
Combo (3D + FFDM)	●	○	○
TomoHD, Low-dose screening with C-View™ synthesised 2D imaging software (3D™ exam + C-View™)	●	○	○
ComboHD (3D™ exam + FFDM + C-View™)	●	○	○
3D™ Screening High Resolution			
Combo (3D™ + FFDM)	●	○	○
TomoHD, Low-dose screening with Intelligent 2D™ synthesised 2D imaging software (3D™ exam + Intelligent 2D™)	●	○	○
Combo (3D™ exam + FFDM + Intelligent 2D™)	●	○	○
3D Mammography™ Diagnostic	●	○	○
Patient Comfort			
SmartCurve™ Breast Stabilization System	●	○	○
Biopsy Solutions			
Stereotactic 2D biopsy	○	○	○
Tomosynthesis biopsy	○	○	○
Contrast Enhanced 2D (CE2D)			
CE2D imaging with I-View™ 2.0 software	○	○	○
CE2D imaging combined with 3D™ Diagnostic: (CE2D+3D™ exam)	○	○	○

Workflow Solutions

	Dimensions Packages		
	3Dimensions™ 2D/3D	6000 2D/3D™	Avia™ 3000
Software Licenses			
Advanced Connectivity License Package: MPPS License / Radiation Dose SR License	●	○	▼
Notices License	●	○	○
Diagnostic Imaging License	●	●	▼
Dynamic Tube Head Motion License	●	●	▼
3D Mammography™ exam imaging options			
Tomosynthesis Imaging License (Standard resolution)	●	○	▼
Clarity HD™ License (Higher resolution)*	●	▼	▼

Additional Options✦

Biopsy○■▲^
Affirm® upright breast biopsy system

Advanced Diagnostics▼■▲^
I-View™ software license for Contrast Enhanced 2D Imaging

Advanced Imaging▼
C-View™ software license for Low-dose 3D Mammography™ Imaging

Intelligent 2D™ imaging technology*,#

Image Analytics
Cenova™ server

ImageChecker® CAD for C-View™ 2D License/Intelligent 2D™ imaging technology license

Quantra™ 2D and 3D™ breast density analysis software license

Documentation

Manuals and Reference Documents
User Manual

Service Manual

Quality Control Manual

DICOM Conformance Statement

System Features

	Dimensions Packages		
	3Dimensions™	6000 2D/3D™	Avia™ 3000
Working Environment			
Powered height adjustment	●	●	◆
Powered memory height adjustment	○	○	◆
Biometric login	○	○	◆
Integrated barcode reader	○	○	○
Flat work surface	●	●	●
Stowable keyboard drawer	●	●	●
Stationary gantry controls	●	◆	◆
Smart positioning in MLO	●	◆	◆
Field light improvements in biopsy	●	○	○
Ease of manual paddle decompression	●	◆	◆
X-Ray exposure foot switch	●	●	○
X-Ray tabletop large button (2)	●	●	●
Safety Features			
Emergency stop button	●	●	●
Emergency compression release button	●	●	●
System Control			
Left/right control position selection	●	●	●
Keyboard and mouse	●	●	●
1.2 MP color LCD control monitor	◆	●	●
LCD touch-screen controls	●	○	◆
Image Monitor			
2 MP medical-grade color LCD display	◆	●	●
3 MP medical-grade color LCD display	●	○	○
Image monitor tilt and swivel	●	●	●
Fixed arm	✚	●	●
Dual-articulating swing-arm	●	○	○
Left/right image monitor position selection	●	●	●
Radiation Protection			
Integrated leaded acrylic X-ray shield; H x W: 219 cm x 86 cm (86 in x 34 in)	●	●	●
Lead equivalence: 0.5 mm	●	●	●
Installation Flexibility			
Mobile coach travel kit	○	○	○

Image Acquisition

	Imaging Modes						
	2D	3D™	Combo	TomoHD	ComboHD	CE2D	CE2D Combo
Parameters							
3D™ exam Scan Angle (°)		15°	15°	15°	15°		15°
3D™ exam Projection Images		15	15	15	15		15
3D™ exam Scan Time		3.7s	3.7s	3.7s	3.7s		3.7s
Cycle Time, Exposure to Exposure	26s	30s	40s	30s	40s	33s	42s
Time to 2D Image View	10s		22s		22s	11s	25s
Time to 3D™ exam Slice View		11s	11s	11s	11s		11s
Time to C-View™ 2D Image View				21s			
Time to CE2D Subtraction Image View						14s	28s

Based on ACR phantom 4.2 cm compressed breast.

System Options and Accessories

Paddles and Accessories

	Dimensions Packages		
Paddles and Accessories	3Dimensions™	6000 2D/3D™	Avia™ 3000
Screening Compression Paddles			
24x29 cm Screening Paddle	●	●	●
18x24 cm Screening Paddle	●	●	●
Small Breast Screening Paddle	●	●	●
Comfort options			
MammoPad® Starter Pack	◆	◆	◆
Diagnostic Compression Paddles			
10 cm Contact Paddle	●	●	○
15 cm Contact Paddle	○	○	○
7.5 cm Spot Contact Paddle	●	○	○
Frameless Spot Contact Paddle	●	○	○
Magnification Compression Paddles			
10 cm Magnification Paddle	●	●	○
15 cm Magnification Paddle	○	○	○
7.5 cm Spot Magnification Paddle	●	○	○
Localization Compression Paddles			
10 cm Open Localization Paddle	○	○	○
15 cm Open Localization Paddle	○	○	○
10 cm Open Magnification Localization Paddle	○	○	○
10 cm Perforated Localization Paddle	○	○	○
15 cm Perforated Localization Paddle	○	○	○
10 cm Perforated Magnification Localization Paddle	○	○	○
Ultrasound Compression Paddles			
Ultrasound Paddle	○	○	○
Imaging Accessories			
Magnification Platform	●	●	○
Localization Cross-hairs	○	○	○
Magnification Localization Cross-hairs	○	○	○
Other Accessories			
Dual-function footswitches (2)	●	●	●
Integrated UPS	●	●	○

Software/Connectivity

DICOM Services
Print

Query

Storage

Storage Commitment

Worklist

IHE Profiles
Mammography Image

Patient Information Reconciliation

Scheduled Workflow

Operating Systems
Windows 10

Additional Options

Workflow Management
Advanced Workflow Manager server and license package

Advanced Workflow Manager additional licenses

General Operating Conditions

Temperature Range	20°C to 30°C (68°F to 86°F)
Max. Rate of Temperature Change	<10°C / hr (50°F)
Relative Humidity Range	20% to 80% non-condensing

Electrical Specifications

System Protection	
Integrated UPS	1000 VA
Electrical Requirements	
Input Line Voltage	100/120/220/230/240 VAC
Input Current	2.0 A max. @ 200/220/230/240 VAC 3.5 A max. @ 100/120 VAC
Frequency	50/60 Hz

General Specifications

Computer and Reconstruction Subsystem	
Design	Fully integrated, zero footprint
CPU Type	Multi-core Intel
Memory	8 GB RAM (min): 3000 16 GB RAM (min): 6000 3Dimensions™
Hard Drive	1.0 TB (min.)
Operating System	Windows 10
Ethernet	10/100/1000 base-T
Removable Storage	CD/DVD+/- R/W
USB Ports	Dual USB 2.0
Local Image Buffer Capacity	
Image buffer	2D: ~9,000 4-view studies; 3D™: ~3,000
Graphics Processors■ ✚	
Advanced capabilities	Generated 2D Imaging

● – Standard

○ – Optional capability, sold separately

▲ – Recommended for biopsy and contrast applications.

◆ – Not available

✚ – Included in kit.

■ – Not for Mobile

★ – At time of initial order only.

▼ – Optional future capability, sold separately. Not available at the time of initial purchase. Please consult your local Hologic sales representative for details on additional requirements.

✦ ✍ Please consult your local Hologic Sales representative for details on requirements.

- not compatible with standard resolution 3D Mammography™ imaging

^ - Optional future capability, sold separately for the 3000 package. Not available at the time of initial purchase. Please consult your local Hologic sales representative for details on additional requirements.

X-ray Gantry Specifications

Gantry Mechanics

C-Arm

Design▼	Split C-arm, biopsy and tomosynthesis capable
Vertical Range	70.5 cm +5.1/-0 cm (27.75 in +2.0/-0 in) to 141 cm +0/-17.8 cm (55.5 in +0/-7.0 in)
Vertical Travel	Motorized
Rotation	2D: +195° to -155° Biopsy and 3D™ exam: +180° to -140°
Source-Image Distance (SID)	70 cm
Patient Face Shield	2D: Removable 3D™ exam: Retractable and removable

Breast Compression

Modes of Operation	Selected by Operator
Pre-compression Range	67 to 134 N (15 lbs to 30 lbs)
Full-compression Range	89 to 178 N (20 lbs to 40 lbs)
Dual-compression Function	1st activation: pre-compression Subsequent activations: incremental increase up to full-compression
Manual-compression Force Limit	300 N (67.4 lbs) maximum
Compression Tilt	Standard or FAST paddle™ mode, User-selectable

Magnification

Platform	Lightweight carbon fiber with frame
Magnification Factors	1.5x, 1.8x

X-ray Collimation

Collimation Modes	Fully-automatic or User-selectable
Pre-defined Collimation Sizes	24x29 cm, 18x24 cm 15x15 cm, 10x10 cm, 7x8.5 cm^, 18x29 cm^

Digital Image Receptor

Technology

Type	TFT-based direct capture
X-ray Absorption Material	Amorphous selenium
Image Receptor Size	Single plate 24 cm x 29 cm
Pixel Size	70 microns FFDM, 70 microns (high-resolution tomo), 100 microns (standard resolution tomo)
Limiting Spatial Resolution	2D: 7.1 lp/mm 3D™ exam: 3.5 lp/mm
Dynamic Range	Linear response over 400:1 in X-ray exposure
Captured Image Bit Depth	14-bits
Saturation X-ray Exposure Level	> 500 mR

Image Capture Geometry

Non-magnified	24 cm x 29 cm (3328 x 4096) center position 18 cm x 24 cm (2560 x 3328) left, center and right positions
Magnified	18 cm x 24 cm (2560 x 3328) center position

Anti-scatter Grid

Grid Structure	Linear grid (3Dimensions™ and new Selenia® Dimensions®)
Grid Behavior	Auto-retracts for magnified 2D and all 3D™ exam views

Storage Environment

Storage Temperature Range	10° C to 30° C (50° F to 86° F)
Maximum Rate of Temperature Change	< 10° C per hour
Relative Humidity Range	10% to 80%, non-condensing

X-ray Subsystem

Integrated Generator

Design	Zero footprint, fully integrated
Type	Constant Potential High Frequency Inverter
Rating	7.0 kW max. (ISOwatt); 200 mA @ 35 kV
Electrical Power Capacity	9.0 kW max.
kV Range	2D: 20 to 39 kV, 2D, 1 kV steps (0.5 kV steps option) 3D™: 20 to 49 kV, 2D, 1 kV steps
mAs Range	3.0 to 500 mAs
mA Range	200 mA, large focal spot 50 mA, small focal spot✦

X-ray Tube

Anode Type	Tungsten, rotating
Anode Design	Bi-angular
Anode Speed	9500 RPM (high speed)
Heat Capacity	222 kJ (300,000 HU)
Target Tube Angle	16°, large focal spot; 10°, small focal spot✦
Focal Spot Size	0.3 mm, large focal spot; 0.1 mm, small focal spot✦
Filtration	0.05 mm Rhodium (Rh) 0.05 mm Silver (Ag) 0.70 mm Aluminum (Al) (3D™ exam) 0.30 mm Copper (Cu) (CE2D)
Port	0.63 mm Beryllium

Electrical Requirements

Input Line Voltage	200/209/220/230/240 VAC
Input Current	3.5 A standby 65 A for 5 s at 208 VAC 40 A max. breaker rating
Frequency	50/60 Hz ± 5%
Number of Phases	Single, permanently wired

X-ray Control

Exposure Modes

Manual	User selects all parameters
Auto-Time	System selects mAs; User selects filter, kV
Auto-kV	System selects kV, mAs; User selects filter
Auto-Filter	System selects filter, kV, mAs
X-ray Activation	Single exposure, either table-top button or Integrated footswitch✦

● - Standard

○ - Optional capability, sold separately

▲ - Recommended for biopsy and contrast applications.

◆ - Not available

✚ - Included in kit.

■ - Not for Mobile

★ - At time of initial order only.

▼ - Optional future capability, sold separately. Not available at the time of initial purchase. Please consult your local Hologic sales representative for details on additional requirements.

✦ - Please consult your local Hologic Sales representative for details on requirements.

- not compatible with standard resolution 3D™ imaging

Product Information

Optional equipment.

Imaging Technology:

3Dimensions™ Mammography System

- The 3Dimensions™ system is available for purchase as a 2D or 3D configuration, with 2D imaging capabilities.*

- File sizes will increase with the higher-resolution imaging mode. Larger file size may require additional hardware or software. Consult your local Hologic representative.

- Clarity HD™ high-resolution 3D Mammography™ imaging is a standard on 3Dimensions™ systems.*

Clarity HD™ high-resolution 3D™ imaging

- Standard with all 3Dimensions systems.**

- Being a combination of both software and hardware, Clarity HD™ is an upgradeable option for existing Selenia® Dimensions® systems.

- Clarity HD™ is a prerequisite for Intelligent 2D™ imaging technology - it is not compatible with C-View™ software.

- Requires minimum software v1.9.

- File sizes will increase with the higher resolution imaging mode. Larger file size may require additional hardware or software. Consult your local Hologic representative.

Intelligent 2D™ Imaging Technology, powered by A.I.

As with any innovation and technology update, planning and education is essential. Visit www.hologiced.com/breast-health for more details.

Requirements:

- 3D Mammography™ system with Clarity HD™ high-resolution 3D™ imaging at software level 1.9.0 or higher. The 3D Mammography™ system acquisition workstation hardware minimums apply.

- Output: DICOM Digital Mammography Image (MG) or DICOM Breast Tomosynthesis Image (BTO).

- Flexible Configurations: Output to SecurView® DX diagnostic workstation and PACS.

Options:

- Intelligent 2D™ Imaging Technology is an option within Hologic 3D Mammography™ exams and its 2D images are always read together with the Clarity HD™ high-resolution 3D images.

- Cenova™ software v3.0 is required for existing Cenova systems, for those who implement Intelligent 2D™ imaging technology with Clarity HD™ high-resolution 3D™ imaging.

3DQuorum™ powered by Genius A.I.™

3DQuorum™ technology utilises Genius AI™. Powered analytics to reconsturct high-resolution 3D Mammography™ data to produce 6mm SmartSlices. 3DQuorum™ technology reduces the typical Hologic Clarity HD™ and Intelligent 2D™ study size, bringing the storage space and network impact down to that of standard resolution 3D™ imaging.

Requirements:

- 3DQuorum™ is available only on Selenia® DImensions® systems with minimum software v.1.0 and Clarity HD™ 3D Mammography™ imaging and 3Dimensions™ systems with minimum software v2.1 and Clarity HD™ 3D Mammography™ imaging

- Minimum requirements: Windows 10, ASY-13349 Computer, Dimensions software v.1.10, Reading workstation: Securview® v10.4. or Unifi™ Workspace v.10.

- Customers using PACS are recommended to work with individual PACS vendor to ensure succesfull integration.

SmartCurve™ Breast Stabilization System

- The SmartCurve breast stabilization system is intended for screening and should not be used for biopsy procedures or for contrast enhanced mammography (I-View™) procedures. It is not recommended for cleavage views, rolled views, or mosaic views of very large breasts. The standard screening paddles are always included with the system and should be used for cases where the SmartCurve™ system is not appropriate.

- The SmartCurve™ breast stabilization system is a standard on 3Dimensions™ systems.

Requires minimum software v1.9.

Image Analytics:

Quantra™ 2.2 Breast Density Assessment Software, powered by machine learning

Requirements:

- Integrable on the Selenia® Dimensions® / 3Dimensions™ acquisition workstation with software versions 1.10/2.1 or later
- Cenova™ customers will need Cenova 3.0 to run Quantra™ 2.2 for Dimensions systems with software versions 1.9/2.0 or older.
- Minimum requirements: Windows 10, 2 GHz Processor Speed, 4 GB Memory, 130 GB HDD Free Disk Space, DVD-ROM, and a 100 Mbps-capable Network Interface Controller. Quantra 2.2 requires minimum software v1.9.
- Quantra 2.2™ is only available for images generated by Hologic 3Dimensions™ and Selenia® Dimensions® systems.

ImageChecker® CAD

- ImageChecker® CAD provides detection for conventional 2D images as well as C-View™ and Intelligent 2D™ synthesized images derived from a tomosynthesis dataset.
- ImageChecker® CAD is now available on the 3Dimensions™ and Dimensions® systems' AWS* allowing image review at the point of care and eliminating the need for a separate server for customers with minimum 3Dimensions™ 2.1 or Dimensions® 1.10 software.
- DICOM compatible results can be sent directly to the radiologist workstation or PACS upon completion of the exam.

Diagnostic Imaging solutions:

I-View™ Contrast Enhanced Mammography Imaging

I-View™ 2.0 Contrast Enhanced Mammography (CEM) imaging is a simple upgrade to any Selenia® Dimensions® and 3Dimensions™ system, giving breast imaging practices diagnostic capabilities.
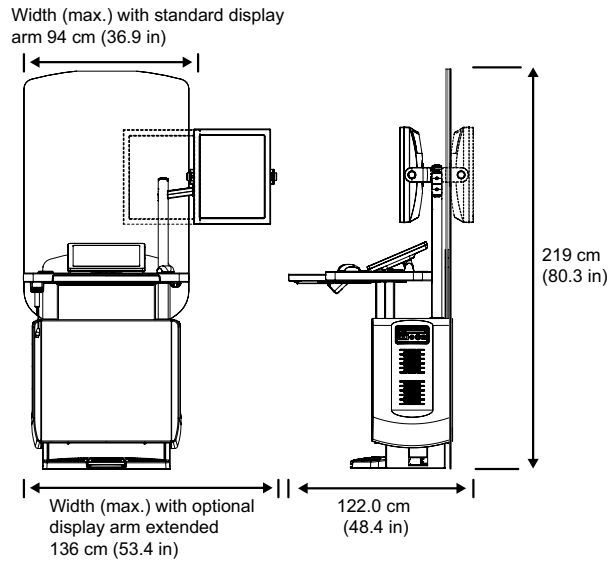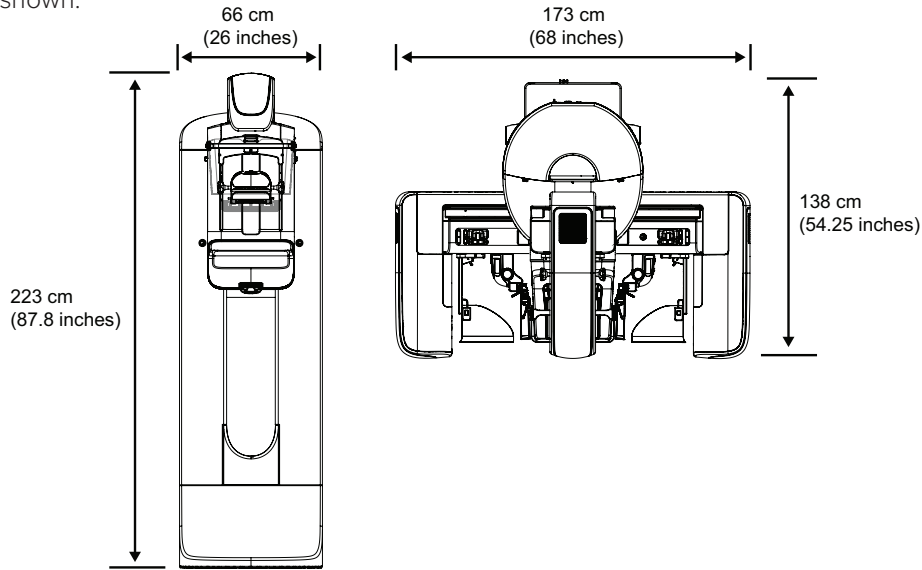
Requirements:

- I-View 2.0™ software license
- * Hardware upgrade - the incorporation of a copper filter
- 3Dimensions™ 2.1 or Selenia® Dimensions® 1.10 software at a minimum
- Computer for system installed required (minimum CMP-01529 for Selenia® Dimensions®; CMP-01503 for 3Dimensions™)
- Possible detector required for older Selenia® Dimensions® systems
- A power injector is recommended (Hologic does not provide this, a third party needs to be contacted to obtain a basic single head power injector).

For smooth implementation of I-View™ software, please contact your local Hologic Representative.

Dimensions System

Optional equipment shown.

66 cm
(26 inches)

173 cm
(68 inches)

138 cm
(54.25 inches)

223 cm
(87.8 inches)

Width (max.) with standard display
arm 94 cm (36.9 in)

219 cm
(80.3 in)

Width (max.) with optional
display arm extended
136 cm (53.4 in)

122.0 cm
(48.4 in)

Complementary site planning is available with your purchase, including connectivity planning and custom room drawings.

NOTE: The Dimensions platform includes the Selenia® Dimensions® and 3Dimensions™ mammography systems.

www.hologic.ca | Canada2@hologic.com | 1-877-209-7192

No Compromise. No Comparison.